

WHAT IS CLAIMED IS:

1. A synchronization device particularly for at least two windshield wipers, of the type that comprises:

- at least two wipers, each of which is composed of a blade that is kinematically connected to an electric motor/gearmotor in order to oscillate between two preset positions;
- means for activating/deactivating said motor/gearmotor;
- means for signaling the transit and direction of transit of each one of said blades through a preset reference position;
- 10 -- means for controlling the signals and driving said activation/deactivation means;

said synchronization device also comprising:

- means for determining the wiping time for each one of said wipers;
- means for measuring, in relation to the transit of said at least two wipers at the respective means for signaling transit and direction of transit, the lead time error of the at least one wiper that is faster with respect to the slower wiper of said at least two wipers;
- 15 -- means for calculating a correction time in order to reduce said lead error of each one of said at least one faster wiper, each correction time being a function of said corresponding lead error;
- 20 -- means for identifying, at each wipe, said slower wiper;
- means for applying each one of said correction times to said corresponding motor/gearmotor of said at least one faster wiper.

2. The device of claim 1, wherein said means for controlling the signals and for driving said activation/deactivation means, said means for determining the wiping time for each one of said wipers, said means for measuring said lead error, said means for calculating said correction time and said means for identifying, at each wipe, the slower wiper are integrated in a single system for synchronization control and management.

30 3. The device of claim 1, wherein each wiper with the corresponding

means for applying the correction time is connected, by means of an appropriately provided interface, to a communications bus, which in turn is functionally connected to a remote control system.

4. The device of claim 1, wherein each wiper with the corresponding means for applying the correction time is functionally connected to a remote control system by means of an optical or radio link.

5. The device of claim 3, wherein said remote control system contains said means for controlling the signals and driving said activation/deactivation means, said means for determining the wiping time for each one of said wipers, said means for identifying, at each wipe, the slower wiper, said means for measuring the lead time error of the at least one faster wiper with respect to said slower wiper, and said means for calculating a correction time in order to reduce said lead error of each one of said at least one faster wiper.

6. The device of claim 1, wherein said means for applying said correction times are constituted by said activation/deactivation means.

7. The device of claim 1, wherein said means for signaling the transit and direction of transit of each one of said blades through a preset reference position are constituted by a proximity switch for each one of said wipers, said proximity switch being adapted to emit a synchronization signal.

8. The device of claim 1, wherein said means for signaling the transit and direction of transit of each one of said wipers for a preset reference position are constituted by an automatic parking switch for each one of said wipers, said automatic parking switch being adapted to emit a synchronization signal.

9. The device of claim 1, wherein said means for applying said correction time are constituted, for each one of said gearmotors, by a switch that is adapted to remove power completely from the corresponding gearmotor.

10. The device of claim 1, wherein said means for applying said

correction time are constituted, for each one of said gearmotors, by at least two switches in a parallel configuration, which are adapted to reduce the power supply of the corresponding gearmotor.

11. The device of claim 1, wherein said electric motor/gearmotor is of
5 the two-speed type.

12. The device of claim 1, wherein said means for applying said correction time are constituted, for each one of said gearmotors, by two switches in a parallel configuration, which are adapted to select the rotation rate.

10 13. The device of claim 1, wherein said means for applying said correction time are constituted, for each one of said gearmotors, by two switches in a series configuration, a first switch being adapted to activate/deactivate said motor/gearmotor, a second switch being adapted to select the speed.